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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/118,010	07/17/1998	SHUNPEI YAMAZAKI	0756-1838	8550

7590 05/21/2004

ROBINSON INTELLECTUAL PROPERTY LAW OFFICE  
PMB 955  
21010 SOUTHBANK STREET  
POTOMAC FALLS, VA 20165

EXAMINER

GUERRERO, MARIA F

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/118,010

Applicant(s)

YAMAZAKI ET AL.

Examiner

Maria Guerrero

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 08/962,840.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 57.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2822

### DETAILED ACTION

1. This Office Action is responsive to the Request for continued examination filed March 29, 2003.

Claims 9-10 are canceled.

Claims 1-8 and 11-73 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on March 29, 2003 has been entered.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 and 11-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamahiko Nishiki et al. (JP 63-279228) (cited by Applicant) in view of Takenouchi et al. (U.S. 5,427,961).

Art Unit: 2822

4. Tamahiko Nishiki et al. discloses a semiconductor device comprising a first substrate, a TFT having pixel electrodes with source and drain regions, a second substrate, a gate insulating film, and a semiconductor film (amorphous silicon (including microcrystalline silicon)) (Fig. 1(A)-6). Tamahiko Nishiki et al. teaches an insulating film (polyimide) having a flat surface provided on the first substrate to planarize the surface (Fig. 1(A)-6, pages 8-15).

Tamahiko Nishiki et al. fails to disclose the substrate being a resinous substrate such as polyethylene terephthalate, polyethylene naphthalate, polyethylene sulfite and polyimide as claimed. Tamahiko Nishiki et al. fails to show the resinous material consisting of: methyl ester of acrylic acid, ethyl ester of acrylic acid, butyl ester of acrylic acid and 2-ethylhexyl ester of acrylic acid as claimed. However, this is known in the art as evidenced Takenouchi et al.

Takenouchi et al. discloses a semiconductor device having a resinous substrate, the resinous substrate made of polyester (e.g., PET (polyethylene terephthalate)), polyimide, fluoroplastic, PES (polyethylene sulfone) (col. 3, lines 49-55). Takenouchi et al. also teaches a resinous layer provided on the resinous substrate including an acrylic resin (e.g. methyl acrylate ester, ethyl acrylate ester, butyl acrylate ester, and 2-ethylhexyl acrylate ester (col. 3, lines 55-60). In addition, Takenouchi et al. discloses providing the film on the substrate with the purpose of leveling the initial surface irregularities (col. 4, lines 10-15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tamahiko Nishiki et al. reference by including

Art Unit: 2822

the resinous substrate taught by Takenouchi et al. in order to reduce cost and to obtain a device easily handled having a larger field of application and free from oligomeros (Takenouchi et al., col. 1, lines 15-25, col. 3, lines 20-25).

Furthermore, the limitation "obtained by crystallizing amorphous silicon" is a product-by process limitation and the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-8 and 11-73 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takafuji et al. (U.S. 4,746,628) is cited as evidence to show that in a broad interpretation the amorphous silicon includes the microcrystalline silicon (Takafuji et al., col. 3, lines 5-10).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is 571-272-1837.

Art Unit: 2822

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Maria Guerrero*  
Maria Guerrero  
Primary Examiner  
May 17, 2004